3 - Service Software

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Service Software

Phoenix

Phoenix is the new generation Service Software. It has been designed to meet the challenges in servicing modern cellular phone technology.

The Phoenix program has been built using component architecture. This means that the actual program is small and most of the program's functionality is divided into dynamically loaded modules (DLLs).

Supported operating systems

Windows 98, 2000, ME and NT 4.0 (SP4).

Hardware requirements for using Phoenix

Minimum:
Processor 233 MHz, RAM memory 64 MB, Disk space 50-100 MB.

Recommended for Windows 2000:
Processor 700 MHz, RAM memory 512 MB, Disk space 50-100 MB.

Introduction

This section briefly describes how to install the Phoenix software and includes some basic information on how to use the program. For more detailed information, please refer to Phoenix's **Help -files**. Each feature in Phoenix has its own Help function, which can be activated while running the program.

Press the *F1* key or the feature's Help-button to activate a Help -file.

Installing Phoenix

1 Download the latest release. Please contact your regional After Market Services point for information on where to download the latest release.

Download and read the release notes, which have useful information on the software version you are using.

2 Download the latest data packages for the products you will be using.

3 Before you start installing the program, check that

- the dongle is attached to parallel port. Contact your supervisor in order to obtain a suitable dongle.
- you have administrator rights (Windows 2000 or NT only). This is required in order to be able to install Phoenix.

4 Install Phoenix by executing the Phoenix installation package and follow the instructions on the screen.

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Initially the setup files are extracted into the file system.

Note: If the setup files are already extracted (left in the file system from previous installation) "Overwrite Protection" dialog appears. Always click "Yes to All" to overwrite the existing setup files.

5 The installation checks that the latest supported dongle driver version is installed. The dongle driver is installed if there is no previous installation of the dongle driver or if the installed dongle driver is older than the latest supported version.

Note: If the dongle driver is installed during installation, you need to reboot your PC and restart the installation after reboot.

Program files are stored under " C:\Program Files\Nokia\Phoenix" (default).

6 Install the data package by executing the installation package and follow the instructions on the screen.

The data packages will create product specific directories under the installation directory.

Data files are stored under " *C:\Program Files\Nokia\Phoenix*" (default).

Uninstalling Phoenix

If you need to remove Phoenix Service Software from your computer:

1 Make sure that the dongle is attached (unregistration).

2 Go to the Control Panel and select **Add/Remove Programs.**

3 Select NEM-4 RELEASE for uninstallation and click **Add/Remove**.

4 Click **OK** to remove the application.

You may have to reboot your PC after uninstallation.

Note: If you have different product packages installed, the components are uninstalled only if they are not included in other product packages.

Data package for Phoenix (product specific)

Before installation

- Product Data Package contains all product specific data to make the Phoenix Service Software ant tools usable with certain phone model.
- It also includes the latest version of flash update package for FLS-4* and FPS-8*.

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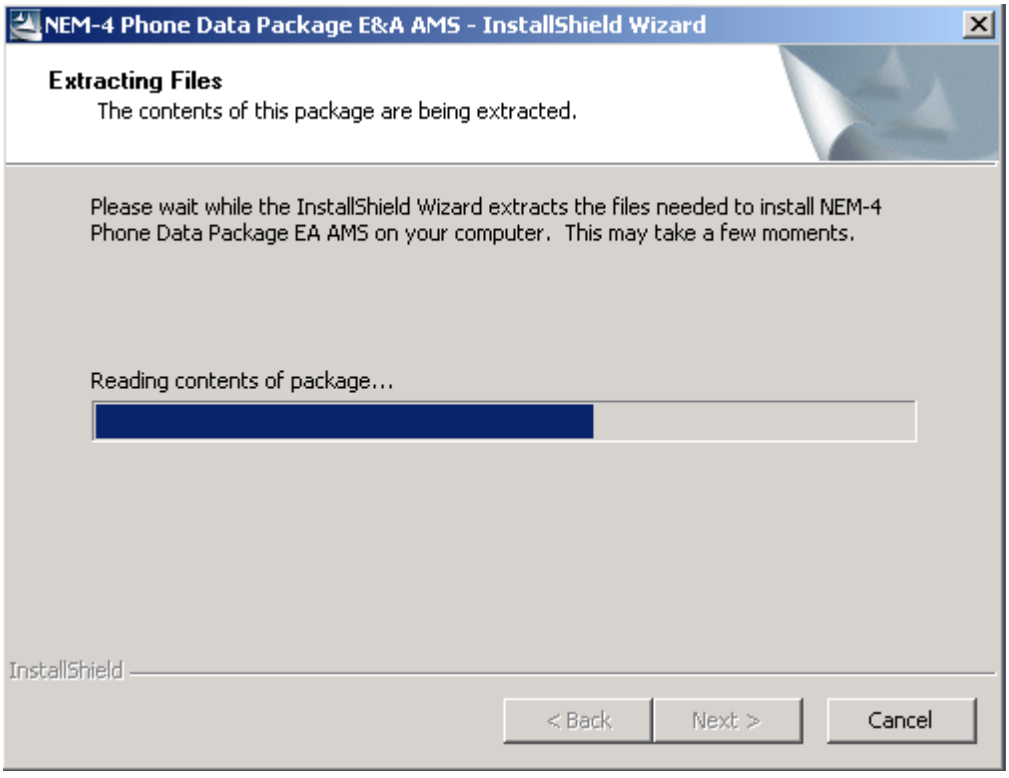
- Check that the Dongle is attached to the parallel port of your computer.
- Install Phoenix Service SW.
- Download the installation package (e.g. *NEM-4_dp_ea_ams_v_1_0_MCUSW3_30_16MB.exe*) to your computer (e.g. C:\TEMP).
- Close all other programs.
- Run the application file (e.g. *NEM-4_dp_ea_ams_v_1_0_MCUSW3_30_16MB.exe*) and follow instructions on the screen.

If you already have the Phoenix Service SW installed on your computer, sooner or later there will be need to update it when new versions are released.

Installation of Phoenix data package (product specific)

Run the NEM-*4_dp_ea_ams_v_1_0_MCUSW3_30_16MB.exe* to start installation.

When you choose "Next" the files needed for installation will be extracted. Please wait...


NEM-4 Phone Data Package E&A AMS - InstallShield Wizard
Extracting Files
The contents of this package are being extracted.
Please wait while the InstallShield Wizard extracts the files needed to install NEM-4 Phone Data Package EA AMS on your computer. This may take a few moments.
Reading contents of package...
InstallShield
< Back
Next >
Cancel

Choose "Next" to continue.

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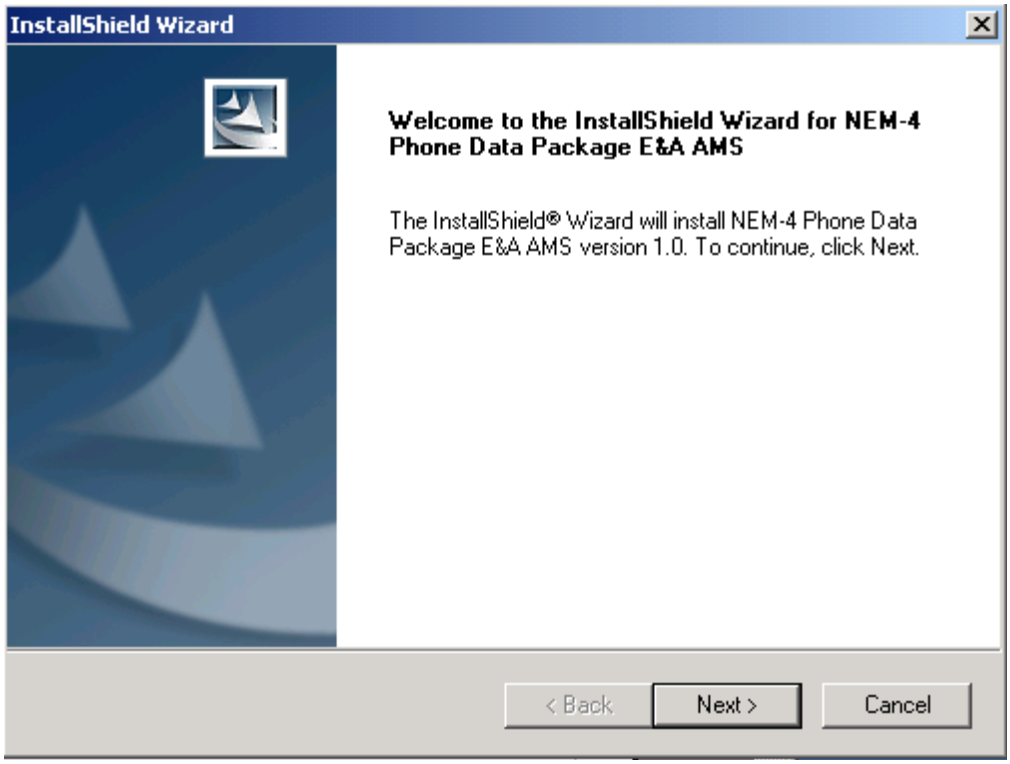
InstallShield Wizard
Welcome to the InstallShield Wizard for NEM-4 Phone Data Package E&A AMS
The InstallShield® Wizard will install NEM-4 Phone Data Package E&A AMS version 1.0. To continue, click Next.
< Back
Next >
Cancel

From this view you can see the contents of the Data Package. Read the text carefully. There should be information about the Phoenix version needed with this data package.

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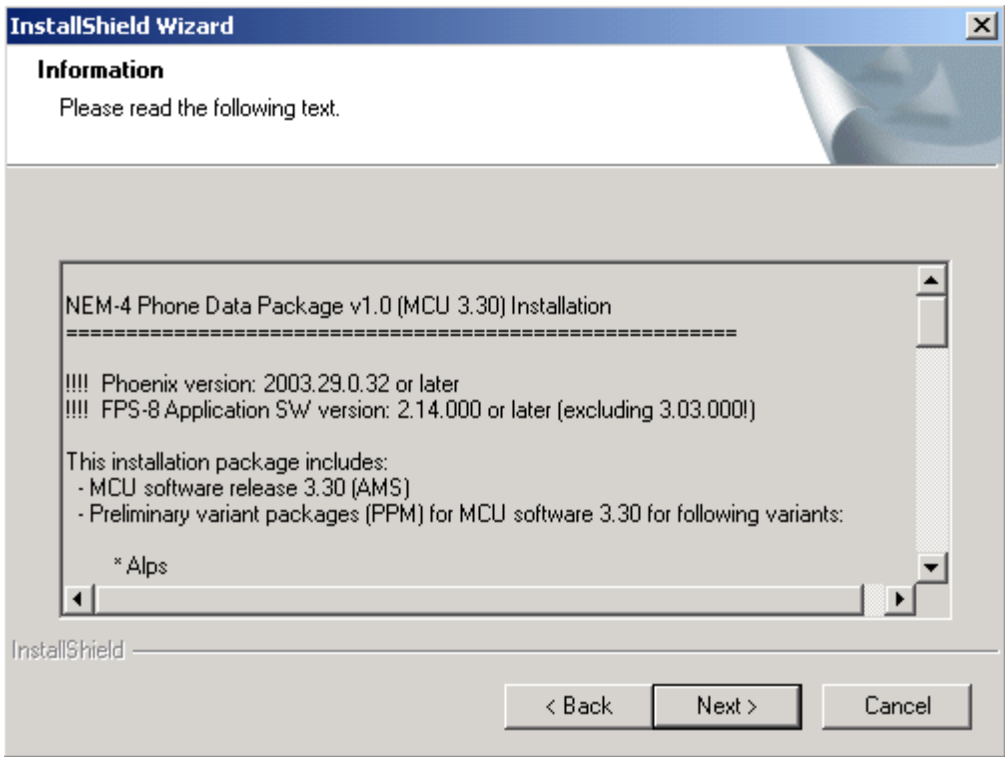
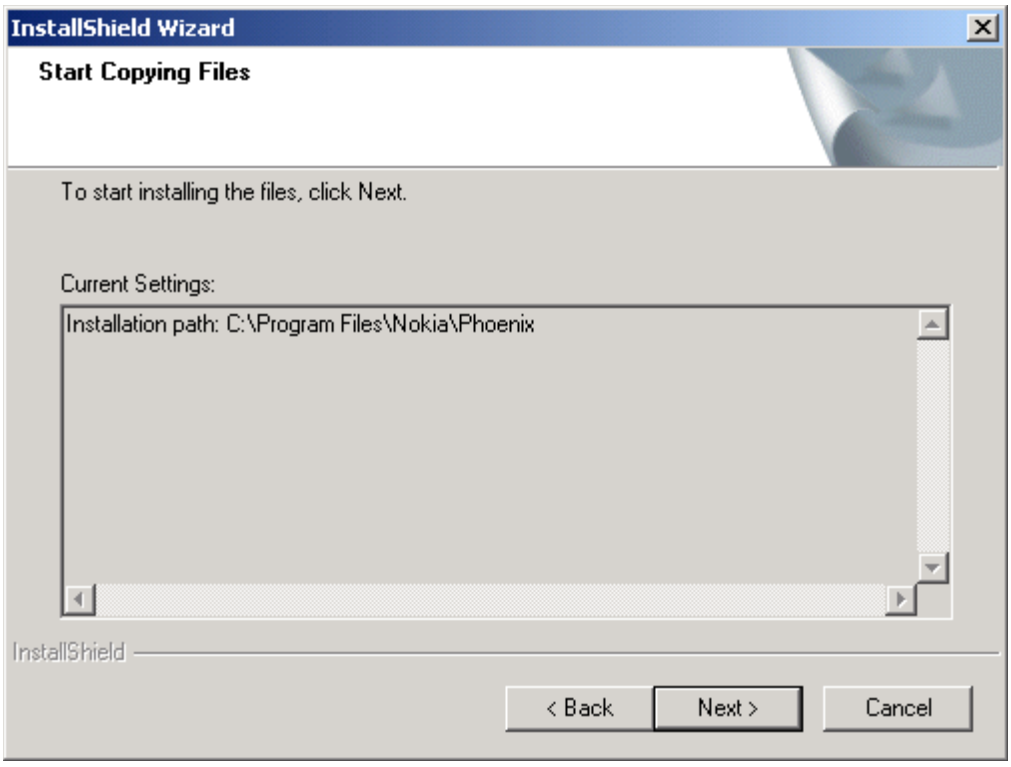
Choose “Next”.


InstallShield Wizard
Information
Please read the following text.
NEM-4 Phone Data Package v1.0 (MCU 3.30) Installation
!!!! Phoenix version: 2003.29.0.32 or later
!!!! FPS-8 Application SW version: 2.14.000 or later (excluding 3.03.000!)
This installation package includes:
- MCU software release 3.30 (AMS)
- Preliminary variant packages (PPM) for MCU software 3.30 for following variants:
* Alps
InstallShield
< Back
Next >
Cancel

Confirm location and choose “Next” to continue. Install shield checks where the Phoenix application is installed ant the directory is shown. Choose “Next” to continue.



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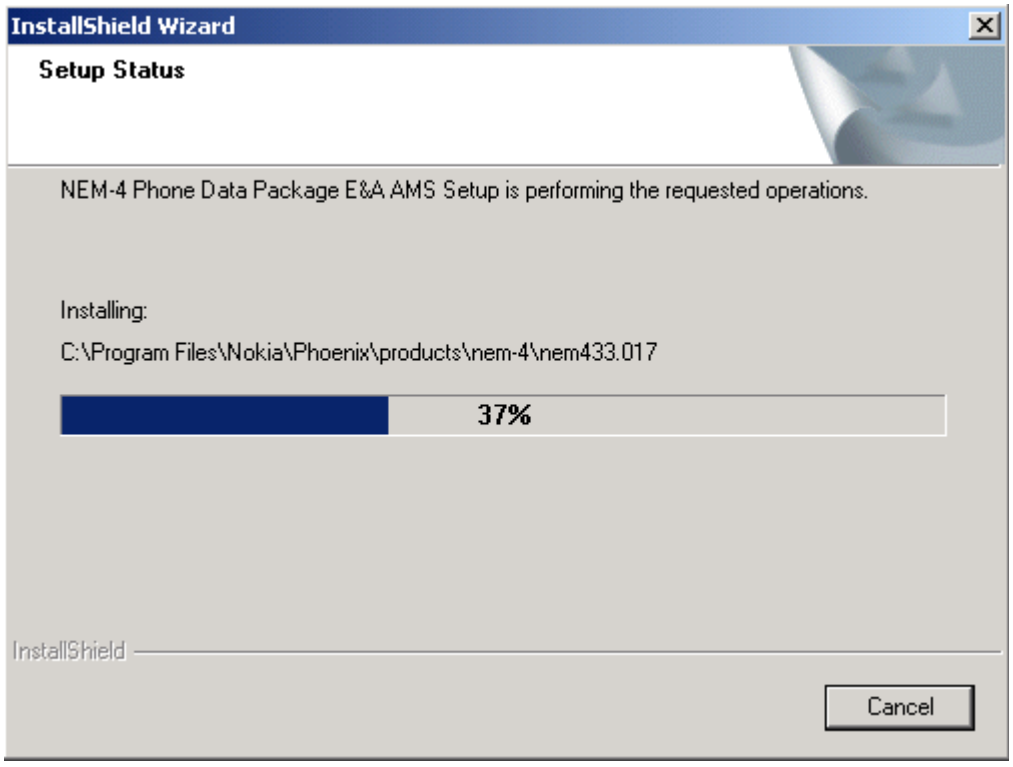
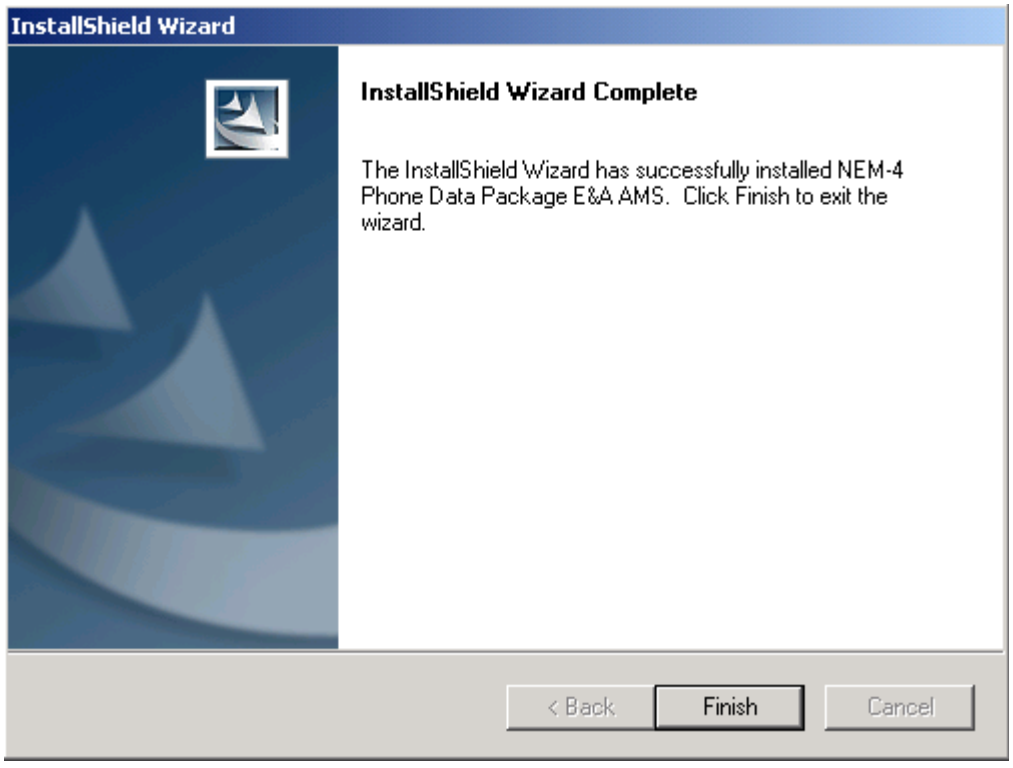
Phone model specific files will be installed. Please wait.



Choose "Finish" to complete installation.


InstallShield Wizard
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed NEM-4 Phone Data Package E&A AMS. Click Finish to exit the wizard.
< Back
Finish
Cancel

You have now all phone model specific files installed in your Phoenix Service SW.

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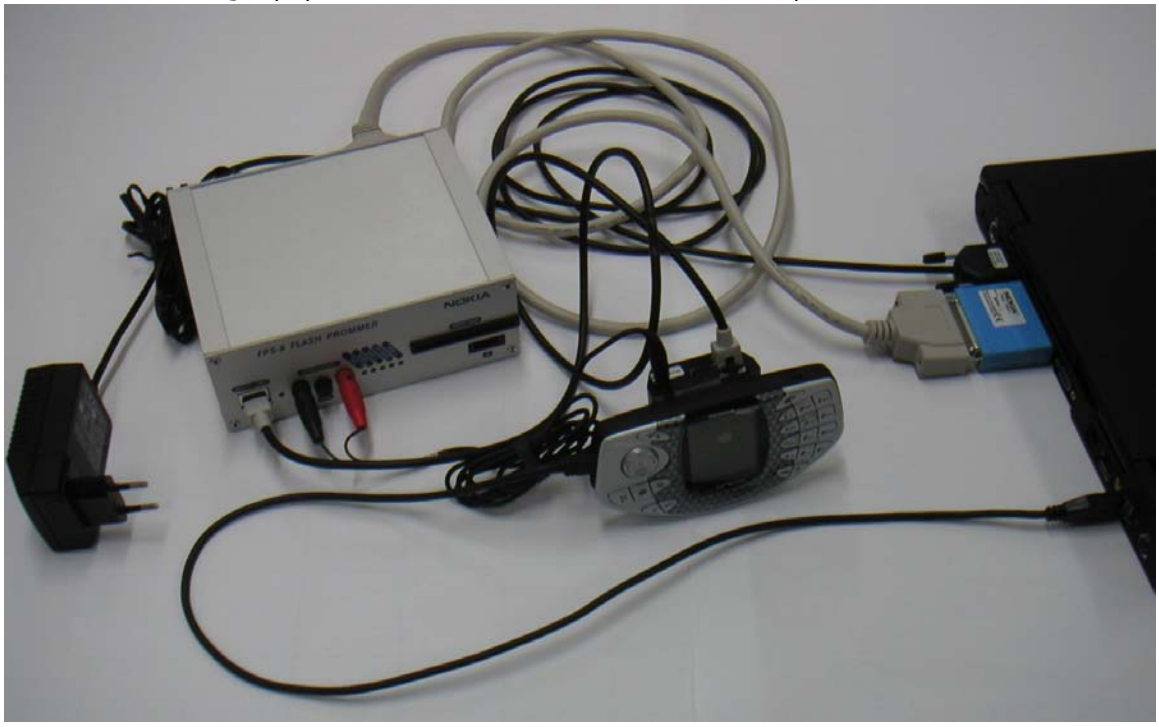
SW update flashing setup

Equipment list

The following equipment is needed for NEM-4 AMS SW update:



Connecting NEM-4 to PC with FPS-8, list of equipment which is needed:

Item	Description	Type	Code
1	Point of Sales flash loading adapter	FLA-41	0770567
2	Power cable	FLC-2	0730185
3	Modular cable	XCS-4	0730178
4	USB cable	DKE-2	0630465
5	Flash prommer box sales pack	FPS-8	0080321
6	Printer cable	AXP-8 incl in FPS-8 sales pack	
7	D9 – D9 cable	AXS-4 incl in FPS-8 sales pack	0730090
8	Software protection key	PKD-1	0750018
9	AC Charger	Incl in FPS-8 sales pack	0680032
10	SRAM Module (2 pcs needed inside FPS-8)	SF-12	0080346 (Code includes one SRAM module)

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Flashing instructions

Connecting phone to service accessories

The purpose of these instructions is to guide you through NEM-4 SW update in case you have set up the FPS-8 or FLS-4S SW update place according to instructions in service manual and you have installed Phoenix SW, flash update files and NEM-4 data package.

Opening phone for SW update

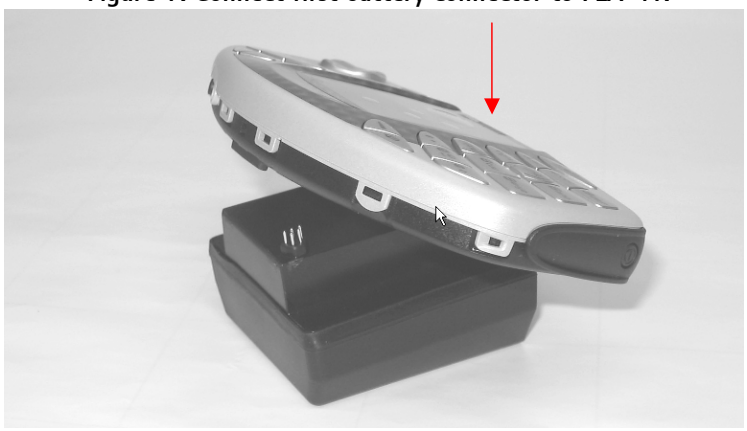
Remove B-cover and battery to get access to FBUS and MBUS flash connectors. Remove also MMC-card and SIM-card.

Connecting phone to FLA-41 adapter

In following pictures is shown the correct way to connect Nokia N-Gage Phone to FLA-41 POS flash adapter.

First connect battery connector to FLA-41:

Figure 1: Connect first battery connector to FLA-41.



Then press FLA-41 and Nokia N-Gage together so that FLA-41 is firmly attached to Nokia N-Gage

Figure 2: FLA-41 is firmly attached to Nokia N-Gage..

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Also DKE-2 USB cable must be connected before flashing. Mini-USB connector end of the cable is connected to Nokia N-Gage and USB-A connector end of the cable is connected to USB port of the PC.

Figure 3: Mini-USB connector end of the cable is connected to Nokia N-Gage.

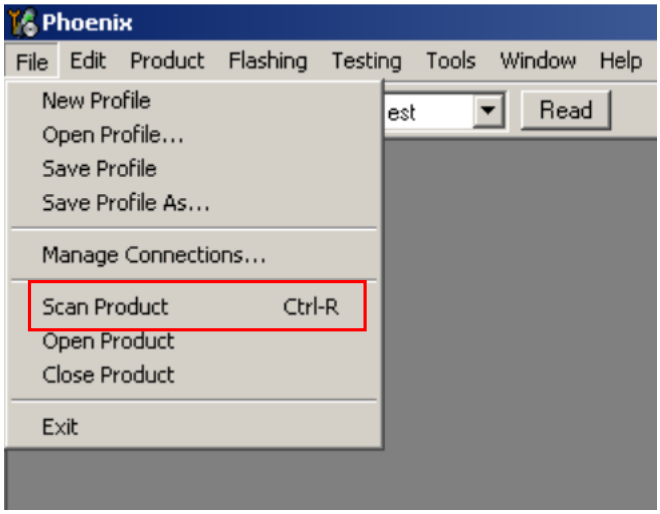
Steps through SW update

Start now Phoenix SW by double clicking **Phoenix icon** on your desktop.

Note! These instructions assume that you have configured buses from Manage Connections menu as advised earlier in this service manual. From Manager connections you can select the correct connection for the Flash adapter FLS-4S or FPS-8.

SW starts and shows you 'no product' text in the bottom of the screen. Product needs now to be scanned by choosing File -> Scan product as shown below:

Figure 4: Scanning product with phoenix.



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If scanning is successful, you will see 'no product' in the bottom of the screen to change into ENOS SW version inside the phone. See below:

Figure 5: Phone replied correctly to Product scan.

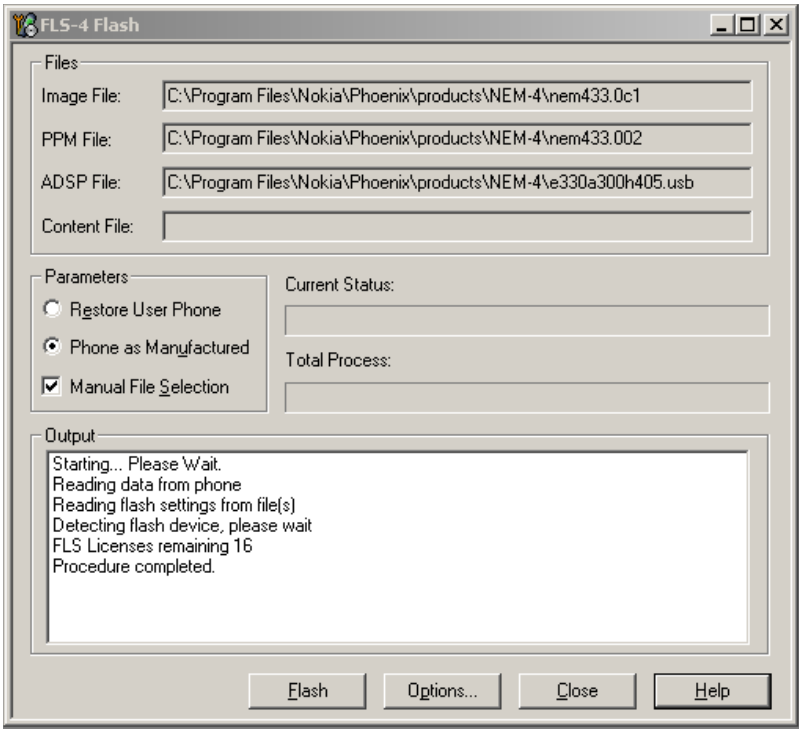
As phone is now correctly connected to FLS-4S or FPS-8 and scanning was successful, SW update can be started from **flashing** menu.

Choose **Flashing** -> **FLS-4 Flash** (If FLS-4S is used)

Choose **Flashing** -> **FPS-8 Flash** (If FPS-8 is used)

The following window will open:

Figure 6: Flashing window



Phoenix SW now automatically reads the Product code, which is stored electronically inside the phone and picks the files, which are associated to this product.

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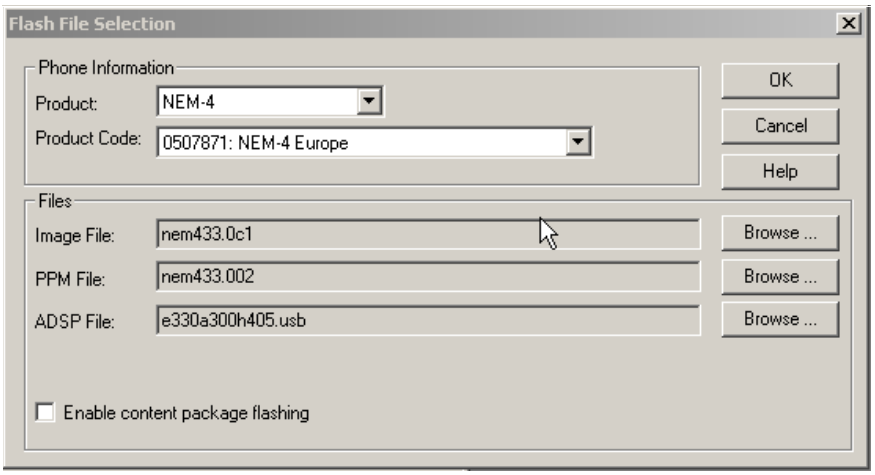
Choose now Flash and you will see the following dialogue box.

Figure 7: Choosing the correct product code



Usually the electronic product code inside the device gives you the correct files to update into the phone. There is one exception to this rule. Exchange units can be updated with other SW than the one mentioned in the product code field.

Alternatives:

- In normal customer SW update case just press **OK** and SW update starts.
- In case you are updating the exchange unit to give it to the customer, choose from the product code list the variant customer has. Basically product code in the type label of the device should tell exactly the variant customer has. However, if customer's transceiver has already been exchanged once, there may be contradiction between variant and type label. Then the SW in the exchange device has to be same variant as to be given to customer.

Now Click on **OK** as shown in fig 7. You will see the following dialogue:

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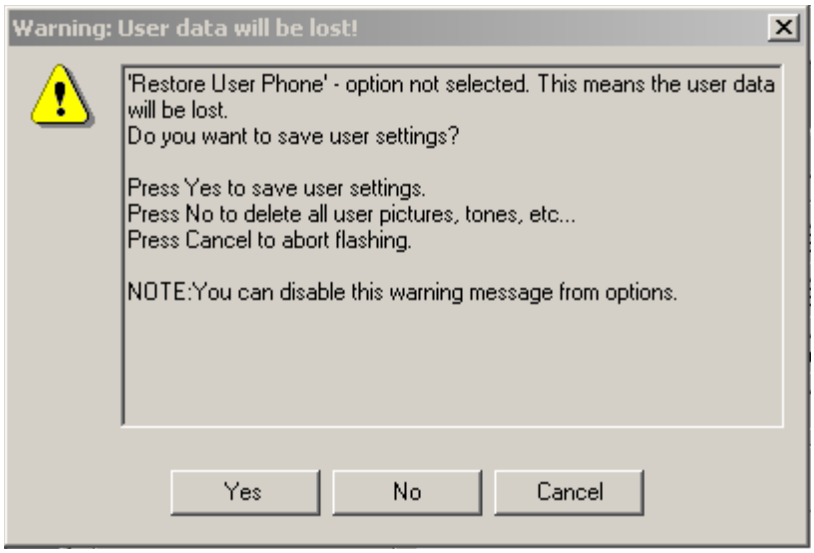
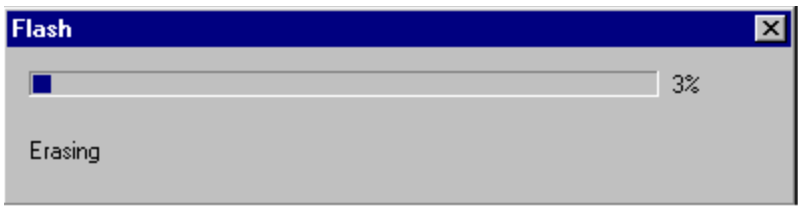
Figure 8: Warning window about user data.


Warning: User data will be lost!
'Restore User Phone' - option not selected. This means the user data will be lost.
Do you want to save user settings?
Press Yes to save user settings.
Press No to delete all user pictures, tones, etc...
Press Cancel to abort flashing.
NOTE:You can disable this warning message from options.
Yes
No
Cancel

Click Yes to flash and to save user settings. Click No to Flash **without** saving user settings **(Note! All user settings, pictures etc will be deleted)**

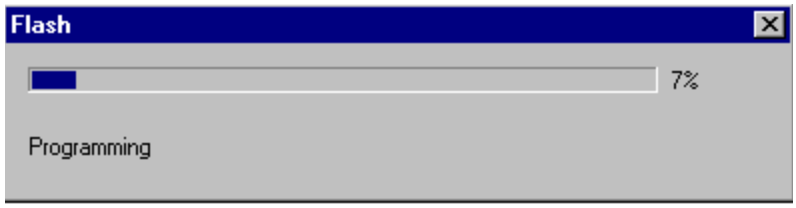
When SW update starts, you can see as Phoenix erases Core package memory area:

Figure 9: Phoenix erasing phone memory.



And after this you can see as Phoenix programs new SW package into the phone.

Figure 10: Phoenix programming phone memory.



Programming has ended when you see the following dialogue:

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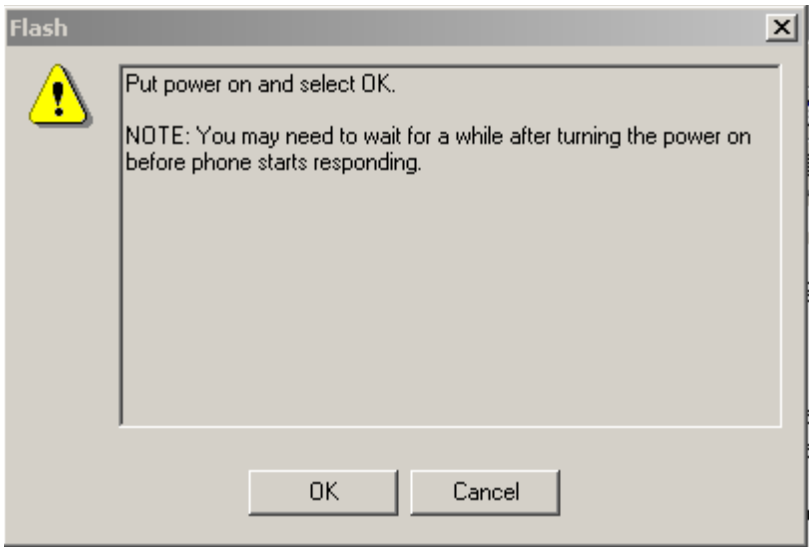
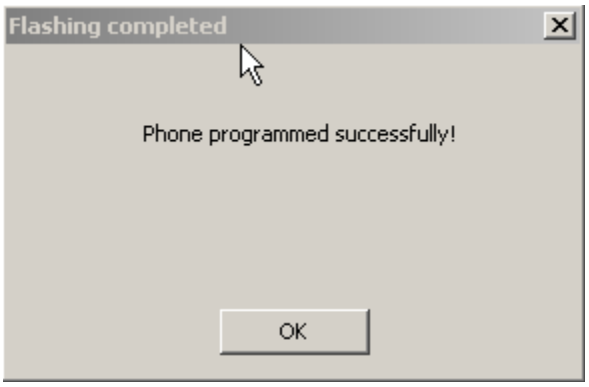
Figure 11: End of programming dialogue.


Flash
Put power on and select OK.
NOTE: You may need to wait for a while after turning the power on before phone starts responding.
OK
Cancel

Now **press phone's power key** and wait until you see NOKIA - text on the phones screen. Click **OK** with mouse. You will see some final operations in Phoenix window rolling on the screen

And finally when everything is ready, the following dialogue box appears:

Figure 12: SW update completed successfully.



Press now ok, wait until scrolling on the screen stops and detach you phone from FLA-41 in reversed order than attaching FLA-41.

Close now the phone into normal use position and insert SIM card and battery. Boot the phone up and see that all the user data has remained in the device correctly and check the SW version by typing *#0000# on the telephone application.

Eenergy management, calibrations and tuning are explained in Troubleshooting section.

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Service concepts

Table 1: New service accessories for NEM-4

PART NO	PART NAME
0770542	RJ-10 SOLDERING JIG
0770565	FLASH ADAPTER FLA-41
0770566	MJS-80 MODULE JIG
0770567	DOCKING STATION ADAPTER MJF-26
0770773	SS-17 Domesheet assembly jig

Table 2: Spare parts for service accessories

PART NO	PART NAME
0770450	Spare pins for FLA-41(0770565)
0770754	Spare pins for MJF-26 (0770567)
0770557	Spare DE-50-T45 pins for MJS-80 (0770566)
0770551	Spare sim-connector pins for MJS-80 (0770566)
0770442	Spare battery,mmc pins for MJS-80 (0770566)

Table 3: Service tools used with other NMP products, but needed also for NEM-4

PART NO	PART NAME
0080321	FPS-8 FLASH PROMMER
0080346	SF12 SRAM MODULE FOR FPS-8
0080396	FPS-8C PARALLEL FLASH PROMMER
0080541	FLS-4S FLS-4S SALES PACK EMEA
0080542	FLS-4S FLS-4S SALES PACK APAC
0080543	FLS-4S FLS-4S SALES PACK AMERICAS
0630465	DKE-2 MINI-B USB CABLE
0680032	ACF-8 UNIV. POWERSUPPLY FPS-8
0730012	PCS-1 POWER SUPPLY CABLE
0730298	CA-10DS PRINTER CABLE
0730090	AXS-4 CABLE ASSEMBLY DMJ00023
0730108	DAU-9S MBUS CABLE DMJ00047
0730178	XCS-4 SERVICE CABLE DMJ00217
0730185	FLC-2 DC CABLE DMJ00215
0730218	XCS-1 SERVICE CABLE DMJ00261

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0730221	XRS-4 RF-CABLE (Use with JBV-1)
0730265	XRS-11 RF-CABLE (Use with MJS-80)
0750018	PKD-1 SOFTWARE PROTECTION KEY
0770298	JBV-1 DOCKING STATION
0081490	JBT-9, Bluetooth test box
0730283	CA-5S Service Battery Cable. Needed for EM-calibrations
0770380	SPI-1 Soldering Paste Injector
0770417	MJS-76 LGA Rework Jig
0770471	SPS-2 Soldering Paste Spreader

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Setup instructions

NEM-4 SW update using FPS-8 and FLA-41

See picture and table on page 9, under the title SW Update Flashing Setup.

NEM-4 SW update in Point of Sales

Item	Description	Type	Code
1	Point of Sales flash loading adapter	FLA-41	0770565
2	Service cable	XCS-1	0730218
3	FLS-4S sates pack for E & A	FLS-4S	0080541
4	FLS-4S sates pack for APAC	FLS-4S	0080542
5	FLS-4S sates pack for US	FLS-4S	0080543
6	USB cable	DKE-2	0630465

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Energy management, Calibrations and RF testing (Assembled phone)

MJF-26 is used with the following equipment:

Item	Description	Type	Code
1	Docking station	JBV-1	0770298
2	Docking Station adapter	MJF-26	0770567
3	Power cable	PCS-1	0730012
4	RF cable	XRS-4	0730221
5	Service cable	DAU-9S	0730108
6	RF-cable	XRF-1	0730085
7	DC cable	SCB-3	0730114
8	Software protection key	PKD-1	0750018

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Component level fault finding

MJS-80 is used with the following equipment:

Item	Description	Type	Code
1	Module jig	MJS-80	0770566
2	Power cable	PCS-1	0730012
3	RF cable	XRS-11	0730221
4	Service cable	DAU-9S	0730108
5	RF-cable	XRF-1	0730085
6	Software protection key	PKD-1	0750018

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